REMARKS

Entry and reconsideration of the claims is respectfully requested, because it is believed that the claim amendments clarify the patentably distinguishing features of the present invention and should not entail any further search by the Examiner since no new features are being added or no new issues are being raised.

The Manual of Patent Examining Procedures sets forth in §714.12 that "[a]ny amendment that would place the case either in condition for allowance or in better form for appeal may be entered." (Underlining added for emphasis) Moreover, §714.13 sets forth that "[t]he Proposed Amendment should be given sufficient consideration to determine whether the claims are in condition for allowance and/or whether the issues on appeal are simplified." The Manual of Patent Examining Procedures further articulates that the reason for any non-entry should be explained expressly in the Advisory Action.

STATUS OF CLAIMS

Claims 1-65 are pending.

Claims 1, 4, 6, 17, 20, 22, 33, 36, 38, 49, 52, 54, and 65 are rejected under 35 USC 102(b) as being unpatentable over Satoh (US Patent No. 5,375,069).

Claims 5, 21, 37, 53 are rejected under 35 USC 103(a) as being unpatentable over Satoh in view of Yuyama (US Patent No. 5,046,017).

Claims 2, 3, 8-10, 12-14, 16, 18, 19, 24-26, 28-30, 32, 34, 35, 40-42, 44-46, 48, 50, 51, 53, 56-58, 60-62, and 64 are rejected under 35 USC 103(a) as being unpatentable over Yuyama and Satoh.

Claims 7, 11, 15, 23, 27, 31, 39, 43, 47, 55, 59 and 63 (i.e. independent claims 7, 11, 23, 27, 39, 43, 55, 59) are allowed.

Claims 1, 12, 17, 28, 32, 33, 44, 48, 49, 60, and 64 are cancelled without disclaimer or prejudice.

Claims 2-6, 18-22, 34-38, 43, 50-59, 61-63, and 65 are amended.

Thus, claims 2-11, 13-16, 18-27, 29-31, 34-43, 45-47, 50-59, 61-63, and 65 remain pending for reconsideration, which is respectfully requested.

No new matter has been added in this Amendment. The foregoing rejections are hereby traversed.

REJECTIONS

The rejected independent claims are 1, 2, 3, 17, 18, 19, 33, 34, 35, 49, 50, 51, and 65.

NEWLY INDEPENDENT CLAIMS 4, 5, 6, 20, 21, 22, 36, 37, 38, 52, 53, and 54

Independent claims 1, 17, 33, and 49, are cancelled without disclaimer or prejudice and dependent claims 4, 5, 6 (depending from cancelled independent claim 1); 20, 21, 22 (depending from cancelled independent claim 17); 36, 37, 38 (depending from canceled independent claim 33); and 52, 53, 54 (depending from cancelled independent claim 49) are amended into independent form, clarifying the patentably distinguishing features of the present invention that the present invention generates a transmission line circuit *suitable for transmission line circuit analysis* by using, for example, topology information, values of passive components, and addition information of the passive components, of a logical circuit corresponding to the transmission line circuit. For example, new independent claim 4 recites, "a transmission line circuit generation unit generating transmission line circuit data suitable for transmission line circuit analysis based on the stored logical circuit and the logical circuit connection topology information stored in the topology designation table."

The present invention provides the patentably distinguishing feature that the generation of a transmission line circuit *suitable for transmission line circuit analysis is realized (generated)* by using, for example, topology information, values of passive components, addition/deletion of the passive components, etc, of a logical circuit corresponding to the transmission line circuit. See, FIG. 1 of the present Application. In other words, Satoh and Yuyama do not disclose or suggest "generating transmission line circuit data suitable for transmission line circuit analysis" by using, for example, topology information, values of passive components, addition/deletion of the passive components, etc, of a logical circuit corresponding to the transmission line circuit.

In particular, the Examiner has allowed independent claims 7, 11, 23, 27, 39, 43, 55, and 55 drawn to "a deletion designation table storing deletion information of a passive component composing a logical circuit, and wherein said transmission line circuit generation unit generates a transmission line circuit by deleting the passive component based on the passive component deletion information stored in the deletion designation table" (allowed independent claim 7). Therefore, Sato and Yuyama do not disclose or suggest using the deletion of the passive components of a logical circuit corresponding to the transmission line

circuit to generate "transmission line circuit *suitable for transmission line circuit analysis*." Further, the Applicants assert that Sato and Yuyama also do not disclose or suggest using the topology information, values of passive components, and addition of the passive components, of a logical circuit corresponding to the transmission line circuit, to generate "transmission line circuit *suitable for transmission line circuit analysis*."

Satoh is directed to a wiring processing system for designing the wiring routing of a multi-layer interconnection structure for an LSI. In particular, the system automatically assigns gates to cells in accordance with a logic file and a structure library. The system automatically searches for a wiring route between the cells and stores the coordinates in a wiring result file 6 (see figure 1 and col. 5, line 66 - col. 6, line 17). That is, the Satoh system generates coordinate based wiring routes between locations. The Examiner relies on Sato's logic file 3 and wiring result file 6, however, Sato does not provide any information associated with the wiring route result file 6 that is based upon the logic file 3 that would allow the performance of the wiring to be analyzed (i.e., the wiring route result file 6 is not same as the present invention's generated "transmission line circuit suitable for transmission line circuit analysis." The Examiner appears to assert that Satoh's wiring result file 6 contains metal pattern that can be used for analysis (page 2 of the Office Action). The amended claims 4, 5, 6 expressly recite generating a transmission line circuit *suitable for transmission line circuit analysis* by using, for example, topology information, values of passive components, addition/deletion of the passive components, etc, of a logical circuit corresponding to the transmission line circuit. The Examiner's rationale for rejecting dependent claims 4, 5 and 6 does not appear to relate to the recitation of these claims, because the present invention generates a transmission line circuit suitable for transmission circuit line analysis by using, for example, topology information.

In contrast, the present invention is designed to produce transmission line data that can be analyzed for performance characteristics, such as noise, and, as a result, produces "transmission line circuit data suitable for transmission line circuit analysis" based upon topology information, values of passive components, and addition of the passive components, of a logical circuit corresponding to the transmission line circuit (see newly independent claims 4, 5, 6, 20, 21, 22, 36, 37, 38, 52, 53, and 54). In regard to the Examiner's assertion that the arguments do not reflect the claim recitation, the Applicants assert that all of the rejected independent claims clearly recite, "generating transmission line circuit data suitable for transmission line circuit analysis." In other words, Sato does not produce any data "suitable for transmission line circuit analysis" as in the claimed present invention.

More particularly, for example, new independent claim 4 calls for the "topology" or shape of the connection to be used in generating the analysis data. The prior art, particularly, Satoh, is only concerned with the physical coordinate connections not with the shape. That is, the invention considers something that the prior art does not. New independent claims 5 emphasizes that values of passive components (resistors, etc.) are obtained from a table. In the prior art, particularly Satoh, the values are calculated. A benefit of the present invention operates faster with more consistent values than the prior art. The present claimed invention recite pulling values from a table. Yuyama also does not teach or suggest pulling values from a table.

INDEPENDENT CLAIM 65

Independent claim 65 is amended to further emphasize the patentably distinguishing features of the invention by reciting,

> storage means for storing at least one of logical circuit topology information, values of passive components, addition and/or deletion information of the passive components;
>
> transmission line circuit generation means for generating transmission line circuit data suitable for transmission line circuit analysis based on the logical circuit stored in the logical circuit storage means and the stored at least one of logical circuit topology information, values of passive components, addition and/or deletion information of the passive components (as amended).

Therefore, at least claim 65 is also now allowable.

INDEPENDENT CLAIMS 2, 3, 18, 19, 34, 35, 50 and 51

These independent claims are amended to incorporate the features of dependent claim 32 (also 48, and 64) to clarify that in contrast to Yuyama and Satoh, the claimed invention provides:

> a logical circuit modification unit modifying the corresponding logical circuit ~~based on~~according to a differential between the transmission line circuit edited by the transmission line circuit editing unit and the logical circuit, and
>
> wherein the logic circuit is automatically modified when the transmission line circuit is re-edited. (claim 2 as amended)

Dependent claims 32, 48, and 64 are cancelled without disclaimer or prejudice.

Yuyama is directed to a system in which, as depicted in figure 3 and discussed in col. 3, line 50+, the cells are designed, the cell layout is designed and rough wiring is routed. The design with the rough wiring is used to calculate a circuit characteristic that is compared to a target. If the target is not, met a re-design occurs starting with the design of the cells. This redesign uses a simple manual process that is added that causes the characteristic to be met.

Satoh as noted above discusses wiring routes being computed and adds nothing to Yuyama.

In contrast, the present invention is automatically "modifying the corresponding logical circuit ~~based on~~according to a difference between the transmission line circuit edited by the transmission line circuit editing unit and the logical circuit," something that the prior art fails to disclose. Therefore, Yuyama and Satoh do not disclose or suggest "modifying the corresponding logical circuit according to a difference between the transmission line circuit edited ... and the logical circuit."

At least claims 2, 3, 18, 19, 34, 35, 50 and 51 are allowable, because the claims have been amended to expressly recite a specific way of automatic reflection (i.e., automatic modification according to "a difference" between the edited transmission line circuit and the logical circuit).

OTHER CLAIMS

Claims 12, 28, 44 and 60 are cancelled without disclaimer or prejudice to improve the form of the claims. Claim 43 is amended to correct minor typographical errors and to improve form.

CONCLUSION

In view of the claim amendments and the remarks, it is believe that the claims are in conditions for allowance, which is respectfully requested.

Finally, if there are any formal matters remaining after this response, the Examiner is requested to telephone the undersigned to attend to these matters.

Respectfully submitted,
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